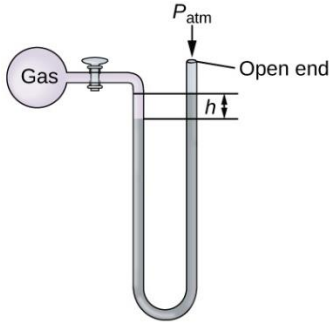
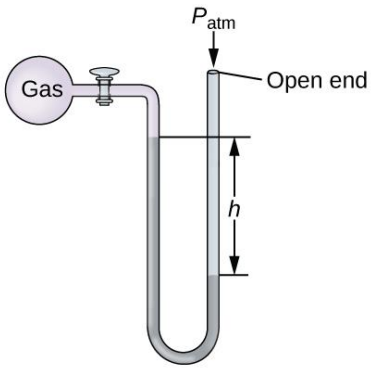
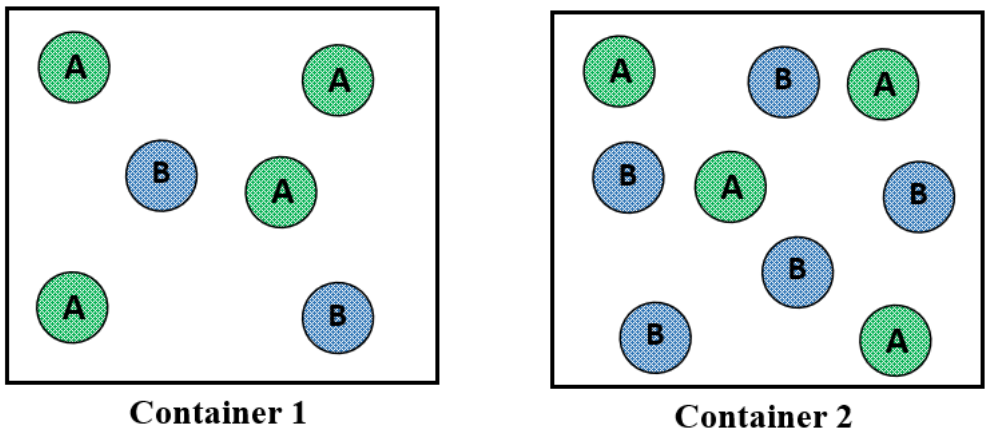
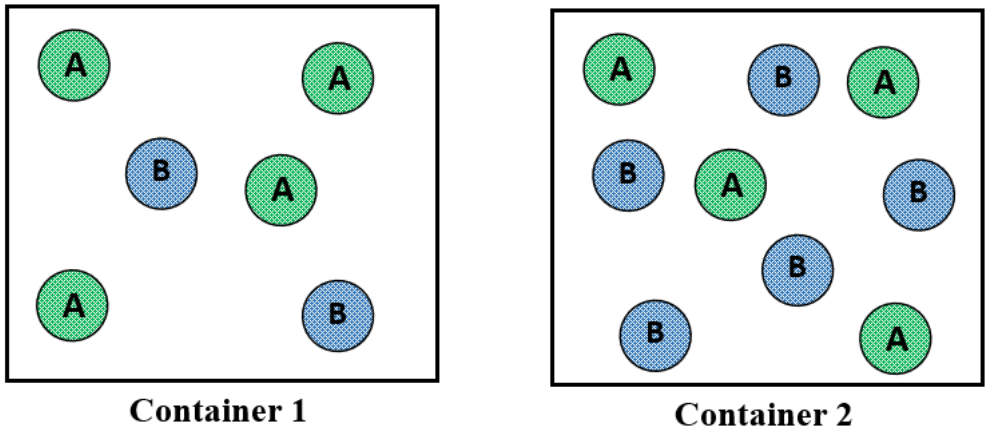
Faculty Submitting: Allison Kelly

Specify here whether "Pre" or "End" of Unit and the Unit #: Pre Unit 8

LOs: Describe the kinetic molecular theory of gases and how it predict the macroscopic behavior of gases *Qualitatively predict the behavior of gases based on the simple gas laws, and perform quantitative calculations using the Ideal Gas Law* *Perform calculations for mixtures of gases using Dalton's law and the concept of a mole fraction*	
Unit 8_ Question 1	**Canvas Question Type: Multiple Answers**
	Choose all of the statements that are true Correct Answers: Pressure is the force exerted on a given area Gas pressure is the result of molecules colliding with surfaces Mercury is often used in barometers because it is very dense Wrong Answers The SI unit of pressure is pounds per square inch (psi) A barometer is used to measure the pressure of a gas trapped in a container
Read More	https://openstax.org/books/chemistry-2e/pages/9-1-gas-pressure
Unit 8_ Question 2	**Canvas Question Type: Multiple Choice** QUESTION GROUP
2a	For the gas picture in the open ended manometer below…  ALT TEXT: The figure shows an open ended manometer. On the left is a chamber full of gas, the tube goes through a U turn, and on the right the tube is open to the atmosphere. The column of mercury is higher on the side of the tube open to the atmosphere. Image Credit: https://openstax.org/books/chemistry-2e/pages/9-1-gas-pressure

	Correct Answer: The pressure of the gas is greater than the pressure of the atmosphere Wrong Answers: The pressure of the gas is equal to the pressure of the atmosphere The pressure of the gas is less than the pressure of the atmosphere
2b	For the gas picture in the open ended manometer below…  ALT TEXT: The figure shows an open ended manometer. On the left is a chamber full of gas, the tube goes through a U turn, and on the right the tube is open to the atmosphere. The column of mercury is higher on the side of the tube connected to the gas chamber. Image Credit: https://openstax.org/books/chemistry-2e/pages/9-1-gas-pressure
	Correct Answer: The pressure of the gas is less than the pressure of the atmosphere Wrong Answers: The pressure of the gas is equal to the pressure of the atmosphere The pressure of the gas is greater than the pressure of the atmosphere
Read More	https://openstax.org/books/chemistry-2e/pages/9-1-gas-pressure
Unit 8_ Question 3	**Canvas Question Type: Multiple DropDown**
	Match each of the simple gas laws to their name [Dropone] Law– The pressure of a gas is [droptwo] proportional to temperature (assuming the amount and volume are held constant). [Dropthree] Law – The volume of a gas is [dropfour] proportional to temperature (assuming the amount and pressure are held constant). [Dropfive] Law – The volume of a gas is [dropsix] proportional to pressure (assuming the amount and temperature are held constant). [Dropseven] Law – The volume of a gas is [dropeight] proportional to the number of mols (assuming the pressure and temperature are held constant).

	DropOne: Amonton's DropTwo: directly DropThree: Charles's DropFour: directly DropFive: Boyle's DropSix: inversely Dropseven: Avogadro's Dropeight: directly
Read More	https://openstax.org/books/chemistry-2e/pages/9-2-relating-pressure-volume-amount-and-temperature-the-ideal-gas-law
Unit 8_ Question 4	**Canvas Question Type: Fill in multiple blanks**
	The ideal gas law is only reasonable for gases at relatively [low] pressure and [high] temperature
Read More	https://openstax.org/books/chemistry-2e/pages/9-2-relating-pressure-volume-amount-and-temperature-the-ideal-gas-law
Unit 8_ Question 5	**Canvas Question Type: True/False**
	The value of R used in calculations is chosen based on the units required by the problem TRUE
Read More	https://openstax.org/books/chemistry-2e/pages/9-2-relating-pressure-volume-amount-and-temperature-the-ideal-gas-law
Unit 8_ Question 6	**Canvas Question Type: Matching**
	Match the variables in Dalton's law to their definitions P_A = the partial pressure of the gas X_A = the mole fraction of the gas P_{Total} = The total pressure of the gas
Read More	https://openstax.org/books/chemistry-2e/pages/9-3-stoichiometry-of-gaseous-substances-mixtures-and-reactions
Unit 8_ Question 7	**Canvas Question Type: Multiple Choice** QUESTION GROUP
7a	Assuming that Container 1 and Container 2 each have a total pressure of 1.0 atm. In which container is the partial pressure of B higher than the partial pressure of A?

	 **Container 1** **Container 2** ALT TEXT: The figure shows two boxes. In the box labeled Container 1, there are four A atoms and two B atoms. In the box labeled Container 2, there are four A atoms and five B atoms.
	Correct Answer: Container 2 Wrong Answers: Container 1 A and B have equal partial pressures in both containers Not enough information to tell
7b	Assuming that Container 1 and Container 2 each have a total pressure of 1.0 atm. In which container is the partial pressure of B <u>lower</u> than the partial pressure of A?  **Container 1** **Container 2** ALT TEXT: The figure shows two boxes. In the box labeled Container 1, there are four A atoms and two B atoms. In the box labeled Container 2, there are four A atoms and five B atoms.
	Correct Answer: Container 1

	Wrong Answers: Container 2 A and B have equal partial pressures in both containers Not enough information to tell
Read More	https://openstax.org/books/chemistry-2e/pages/9-3-stoichiometry-of-gaseous-substances-mixtures-and-reactions
Unit 8_ Question 8	**Canvas Question Type: Multiple Answers**
	Choose all of the statements which are postulates of kinetic molecular theory
	Correct Answers: Gas molecules are in continuous motion, traveling in straight lines until collision Gas molecules exert not attractive or repulsive forces on each other or the container The average kinetic energy of the gas molecules is proportional to the kelvin temperature Wrong Answers: Gas molecules are all noble gases Pressure results from the low density of gases
Read More	https://openstax.org/books/chemistry-2e/pages/9-5-the-kinetic-molecular-theory